

Claim Amendments

E' Claim 1. (cancelled)

Claim 2. (cancelled)

Claim 3. (cancelled)

Claim 4. (previously presented)

The method of claim 15 further characterized by and including the step of providing a coating of reflective material over at least some of the interior surface of the furnace.

Claim 5. (cancelled)

Claim 6. (previously presented)

The method of claim 15 further including the step of providing a ceramic or other high melting point support structure to support the tool steel workpiece.

Claim 7. (previously presented)

The method of claim 15 further including the step of providing an air atmosphere in the furnace.

Claim 8. (previously presented)

The method of claim 15 further including the step of providing a non-air environment in the furnace.

Claim 9. (previously presented)

The method of claim 15 further including the step of providing a vacuum environment in the furnace.

Claim 10. (withdrawn)

In a system for heat treating tool steel,

a furnace,

support structure for tool steel workpieces to be heat treated in the furnace, and

a source of infrared heat energy arranged within the furnace to direct infrared heat energy against tool steel workpieces in the furnace.

Claim 11. (withdrawn)

The tool steel heat treat system of claim 10 further characterized in that

the source of infrared heat energy is tungsten halogen lamp means.

Claim 12. (withdrawn)

The tool steel heat treat system of claim 11 further including

a reflective coating on the interior of the furnace over at least some of said interior surface which the infrared heat energy is exposed to.

Claim 13. (withdrawn)

The tool steel heat treat system of claim 12 further characterized in that the coating is formed from one or more of the metals in the group consisting of gold, silver and aluminum.

Claim 14. (withdrawn)

The tool steel heat treat system of claim 11 further including

ceramic or other high melting point support structure to support the tool steel workpiece in the furnace.

Claim 15. (previously presented)

E¹ In a method of heat treating bars, blocks and other tool steel workpieces the steps of providing a heat treatment furnace of a size suitable to receive a tool steel workpiece to be heat treated,

A providing a heat source in the interior of the furnace consisting of a source of infrared heat energy,

subjecting the tool steel workpiece to heat treatment by exposing said tool steel workpiece to infrared heat energy from the infrared heat energy source and

maintaining said tool steel workpiece stationary during subjection of the workpiece to heat treatment from the infrared energy source.

Claim 16. (previously presented)

In a method of heat treating bar, block and other tool steel workpieces the steps of providing a heat treatment furnace of a size suitable to receive a tool steel workpiece to be heat treated,

providing a source of infrared heat energy in the interior of the furnace consisting of tungsten halogen lamp means, subjecting the tool steel workpiece to heat treatment by exposing said tool steel workpiece to infrared heat energy from the tungsten halogen lamp means and

maintaining said tool steel workpiece stationary during subjection of the workpiece

to heat treatment from the infrared energy source.

Claim 17. (previously presented)

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The method of claim 16 further including the step of
generating a temperature of up to 5000°F in a tool steel workpiece located in close
proximity thereto from the tungsten halogen lamp means.

Claim 18. (cancelled)

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Claim 19. (previously presented)

In a method of heat treating a tool steel workpiece the steps of
providing a heat source in the interior of a furnace of a size suitable to receive a tool
steel workpiece to be heat treated,
providing a coating of reflective material selected from the group consisting of gold,
silver and aluminum over at least some of the interior surface of the furnace, and
subjecting the tool steel workpiece to heat treatment by exposing said tool steel
workpiece to infrared heat energy from an infrared heat energy source.
